

304 Series™

LED Interior Recessed Luminaire

Rev. Date: V4 10/28/2020

Product Description

High performance energy efficient LED down light, designed for use in drop ceilings with 20-24" (508-610mm) on center building construction. Luminaire mounts to 2' x 2' (0.6m x 0.6m) heavy gauge steel tile allowing it to be mounted directly into grid ceiling systems. Tile includes mounting slots to allow for bailing wire, as required by local code. Slim, low profile design. Luminaire is constructed from die cast and extruded aluminum components. LED driver is mounted in a sealed weather-tight center chamber that allows for access from below the luminaire. High performance heat sinks specifically designed for LED recessed applications

Applications: Interior high-bay or low-bay, convenience stores, warehouses and gymnasiums

Performance Summary

Patented NanoOptic® Product Technology

Assembled in the U.S.A. of U.S. and imported parts

CRI: Minimum 70 CRI

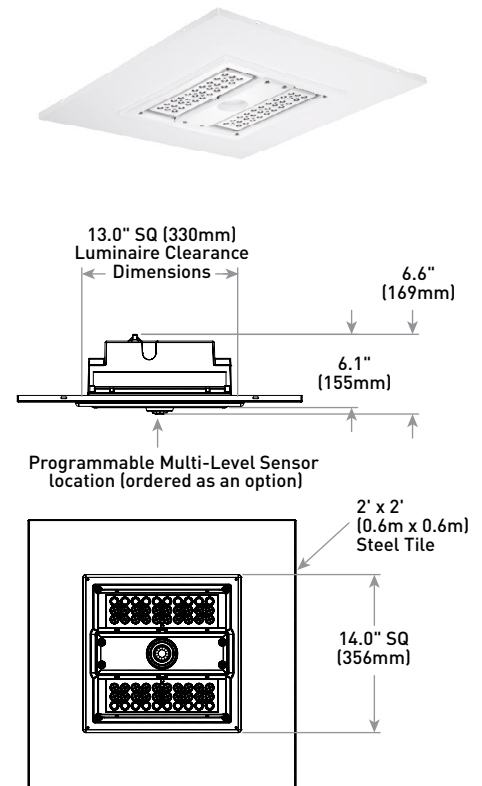
CCT: 4000K (+/- 300K), 5700K (+/- 500K) standard

Limited Warranty*: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

*See <http://creelighting.com/warranty> for warranty terms

Accessories

Field-Installed
Hand-Held Remote XA-SENSREM - For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required



LED Count (x10)	Weight
04	22.0 lbs. (10.0kg)
06	22.0 lbs. (10.0kg)

Ordering Information

Example: INT-304-5M-RM-04-E-UL-WH-350-IC

INT-304		RM		E					
Product	Optic	Mounting	LED Count (x10)	Series	Voltage	Color Options	Drive Current	Options	
INT-304	5M Type V Medium 5S Type V Short PS Petroleum Symmetric SL Sparkle Petroleum 40 40° Flood	RM Recessed	04 06 - Available on Non-IC rated product only	E	UL Universal 120-277V - Available on IC rated product only UH Universal 347-480V - Available on IC rated product only 12 120V - Available on Non-IC rated product only 27 277V - Available on Non-IC rated product only	BK Black BZ Bronze SV Silver WH White	350 350mA 525 525mA - Available on Non-IC rated product only 700 700mA - Available on Non-IC rated product only - Available with 40 LEDs only	DIM 0-10V Dimming - Control by others - Refer to Dimming spec sheet for details - Can't exceed specified drive current F Fuse - Compatible only with 120V, 277V or 347V (phase to neutral) - Consult factory if fusing is required for 208V, 240V or 480V (phase to phase) - Refer to PML spec sheet for availability with PML options - When code dictates fusing, use time delay fuse IC Type IC Rated - Required for applications where there may be direct contact with insulation - Available with 40 LEDs @ 350mA only - Available with UL or UH voltages only PML Programmable Multi-Level - Refer to PML spec sheet for details - Intended for downlight applications at 0° tilt 40K 4000K Color Temperature - Minimum 70 CRI - Color temperature per luminaire	



US: creelighting.com (800) 236-6800

Canada: creelighting-canada.com (800) 473-1234



Product Specifications


CONSTRUCTION & MATERIALS

- High performance energy efficient LED down light, designed for use in drop ceilings with 20-24" (508-610mm) on center building construction
- Luminaire mounts to 2' x 2' (0.6m x 0.6m) heavy gauge steel tile allowing it to be mounted directly into grid ceiling systems
- Tile includes mounting slots to allow for bailing wire, as required by local code
- Slim, low profile design
- Luminaire constructed from rugged die cast and extruded aluminum components
- LED driver is mounted in a sealed weathertight center chamber allowing access from below the luminaire
- High performance heat sinks specifically designed for LED recessed applications
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultradurable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Black, bronze, silver, and white are available
- **Weight:** See Weight Chart on page 1

ELECTRICAL SYSTEM

- **Input Voltage:** 120-277V or 347-480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- **10V Source Current:** 0.15mA
- **Operating Temperature Range:** IC: 350mA: -40°C - +30°C (-40°F - +86°F); Non-IC: 350mA: -40°C - +50°C (-40°F - +122°F); 525mA: -40°C - +40°C (-40°F - +104°F); 700mA: -40°C - +30°C (-40°F - +86°F)
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- Suitable for through wiring
- Meets FCC Part 15, Subpart B, Class A limits for conducted and radiated emissions
- ANSI C136.2 10kV surge protection, tested in accordance with IEEE/ANSI C62.41.2
- Thermally protected Type NON-IC in accordance with Article 410 of the NEC and UL 1598 [n/a on IC rated luminaires]
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- Meets Buy American requirements within ARRA
- RoHS compliant. Consult factory for additional details
-  **CA RESIDENTS WARNING:** Cancer and Reproductive Harm - www.p65warnings.ca.gov

Electrical Data*							
LED Count (x10)	System Watts 120-480V	Total Current (A)					
		120V	208V	240V	277V	347V	480V
350mA							
04	46	0.39	0.24	0.22	0.21	0.15	0.12
06	69	0.57	0.34	0.30	0.27	0.21	0.16
525mA							
04	71	0.59	0.35	0.31	0.28	0.21	0.16
06	101	0.84	0.49	0.43	0.38	0.30	0.22
700mA							
04	94	0.79	0.46	0.40	0.36	0.28	0.21

* Electrical data at 25°C (77°F). Actual wattage may differ by +/- 10% when operating between 120-277V or 347-480V +/-10%

304 Series™ Ambient Adjusted Lumen Maintenance ¹						
Ambient	Drive Current	Initial LMF	25K hr Reported ² LMF	50K hr Reported ² LMF	75K hr Estimated ³ LMF	100K hr Estimated ³ LMF
5°C (41°F)	350mA	1.04	1.01	0.99	0.98	0.96
	525mA					
	700mA					
10°C (50°F)	350mA	1.03	1.00	0.98	0.97	0.95
	525mA					
	700mA					
15°C (59°F)	350mA	1.02	0.99	0.97	0.96	0.94
	525mA					
	700mA					
20°C (68°F)	350mA	1.01	0.98	0.96	0.95	0.93
	525mA					
	700mA					
25°C (77°F)	350mA	1.00	0.97	0.95	0.94	0.92
	525mA					
	700mA					

¹ Lumen maintenance values at 25°C (77°F) are calculated per IES TM-21 based on IES LM-80 report data for the LED package and in-situ luminaire testing. Luminaire ambient temperature factors (LATF) have been applied to all lumen maintenance factors. Please refer to the [Temperature Zone Reference Document](#) for outdoor average nighttime ambient conditions.

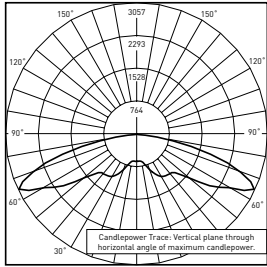
² In accordance with IES TM-21, Reported values represent interpolated values based on time durations that are up to 6x the tested duration in the IES LM-80 report for the LED

³ Estimated values are calculated and represent time durations that exceed the 6x test duration of the LED

Photometry

All published luminaire photometric testing performed to IES LM-79-08 standards. To obtain an IES file specific to your project consult: <http://creelighting.com/products/indoor/high-bay-low-bay/304-series>

5M



INT-304-5M-**-06-E-UL-525-40K
Based on ITL Test Report #: 78147
Initial Delivered Lumens: 12,508

Coefficients Of Utilization - Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	104	97	91	85
2	90	79	69	61
3	79	65	54	45
4	70	55	43	34
5	63	47	35	27
6	57	41	30	22
7	53	36	26	18
8	49	32	22	15
9	45	29	20	13
10	42	27	18	11

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m ²)				
Vertical Angle	Horizontal Angle			
	0°	45°	90°	
	45°	30,415	35,525	30,060
55°	61,800	64,775	62,412	
65°	121,907	98,868	119,948	
75°	117,516	124,206	115,285	
85°	40,599	22,027	31,817	

Type V Medium Distribution		
LED Count (x10)	4000K	5700K
	Initial Delivered Lumens*	Initial Delivered Lumens*
350mA IC Rated		
04	4,291	4,456
350mA Non-IC Rated		
04	4,516	4,690
06	6,651	6,907
525mA Non-IC Rated		
04	6,323	6,566
06	9,311	9,669
700mA Non-IC Rated		
04	7,678	7,973

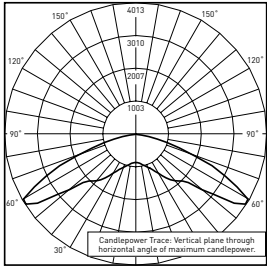
* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	732	N/A	7.9%
0-40	1479	N/A	16.0%
0-60	4473	N/A	48.0%
0-90	9311	N/A	100%
0-180	9311	N/A	100%

Photometry

All published luminaire photometric testing performed to IES LM-79-08 standards. To obtain an IES file specific to your project consult: <http://creelighting.com/products/indoor/high-bay-low-bay/304-series>

55



INT-304-5S-**-06-E-UL-525-40K
Based on ITL Test Report #: 77876
Initial Delivered Lumens: 12,738

Coefficients Of Utilization - Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	107	101	96	92
2	94	84	76	69
3	83	71	61	53
4	74	60	49	41
5	67	51	41	33
6	60	45	34	26
7	55	39	29	22
8	51	35	25	18
9	47	31	22	16
10	44	29	20	14

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m ²)			
Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	50,299	48,441	51,171
55°	89,959	108,814	84,851
65°	118,658	121,962	115,321
75°	25,442	65,219	31,419
85°	2,356	4,712	1,414

Type V Short Distribution		
LED Count (x10)	4000K	5700K
	Initial Delivered Lumens*	Initial Delivered Lumens*
350mA IC Rated		
04	4,768	4,952
350mA Non-IC Rated		
04	5,018	5,211
06	7,390	7,674
525mA Non-IC Rated		
04	7,025	7,295
06	10,346	10,744
700mA Non-IC Rated		
04	8,859	8,531

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

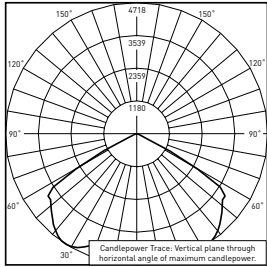
Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	941	N/A	9.1%
0-40	1,983	N/A	19.2%
0-60	6,577	N/A	63.6%
0-90	10,346	N/A	100%
0-180	10,346	N/A	100%

304 Series™ LED Interior Recessed Luminaire

Photometry

All published luminaire photometric testing performed to IES LM-79-08 standards. To obtain an IES file specific to your project consult: <http://creelighting.com/products/indoor/high-bay-low-bay/304-series>

PS



INT-304-PS-**-06-E-UL-525-40K
Based on ITL Test Report #: 76940
Initial Delivered Lumens: 13,581

Coefficients Of Utilization - Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	111	108	104	101
2	103	96	91	86
3	95	86	79	73
4	87	77	69	63
5	81	69	61	55
6	74	62	54	48
7	69	56	48	42
8	64	51	43	38
9	60	47	39	34
10	56	43	35	30

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m ²)				
Vertical Angle	Horizontal Angle			
	0°	45°	90°	
45°	65,750	90,104	66,492	
55°	59,591	100,348	59,431	
65°	2,951	6,895	3,106	
75°	1,116	913	1,217	
85°	452	301	452	

Petroleum Symmetric Distribution		
LED Count (x10)	4000K	5700K
	Initial Delivered Lumens*	Initial Delivered Lumens*
350mA IC Rated		
04	4,874	5,062
350mA Non-IC Rated		
04	5,130	5,327
06	7,554	7,844
525mA Non-IC Rated		
04	7,181	7,458
06	10,576	10,982
700mA Non-IC Rated		
04	8,720	9,056

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

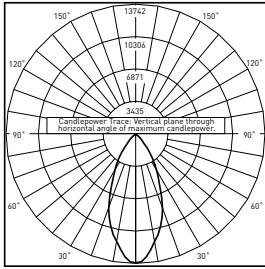
Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	3,259	N/A	30.8%
0-40	5,690	N/A	53.8%
0-60	10,293	N/A	97.3%
0-90	10,576	N/A	100%
0-180	10,576	N/A	100%

304 Series™ LED Interior Recessed Luminaire

Photometry

All published luminaire photometric testing performed to IES LM-79-08 standards. To obtain an IES file specific to your project consult: <http://creelighting.com/products/indoor/high-bay-low-bay/304-series>

40°



INT-304-40-**-06-E-UL-525-40K
Based on ITL Test Report #: 78011
Initial Delivered Lumens: 12,497

Coefficients Of Utilization - Zonal Cavity Method				
RC %:	80			
RW %:	70	50	30	10
RCR: 0	119	119	119	119
1	113	110	108	105
2	107	102	98	94
3	102	95	90	86
4	96	88	83	78
5	91	83	76	72
6	86	77	71	67
7	82	73	66	62
8	78	68	62	58
9	74	64	58	54
10	71	61	55	51

Effective Floor Cavity Reflectance: 20%

Average Luminance Table (cd/m ²)			
Vertical Angle	Horizontal Angle		
	0°	45°	90°
45°	25,142	31,417	26,642
55°	11,435	11,824	11,726
65°	4,590	4,623	4,325
75°	1,456	1,510	1,564
85°	641	320	480

40° Flood Distribution		
LED Count (x10)	4000K	5000K
	Initial Delivered Lumens*	Initial Delivered Lumens*
350mA IC Rated		
04	4,768	4,952
350mA Non-IC Rated		
04	5,018	5,211
06	7,390	7,674
525mA Non-IC Rated		
04	7,025	7,295
06	10,346	10,744
700mA Non-IC Rated		
04	8,531	8,859

* Initial delivered lumens at 25°C (77°F). Actual production yield may vary between -10 and +10% of initial delivered lumens

Zonal Lumen Summary			
Zone	Lumens	% Lamp	Luminaire
0-30	6,882	N/A	66.5%
0-40	8,854	N/A	85.6%
0-60	10,194	N/A	98.5%
0-90	10,346	N/A	100%
0-180	10,346	N/A	100%